

XII. *On a new Genus of Plants from Chile.* By JOHN MIERS, Esq.,
F.L.S., &c.

Read December 21st, 1841.

AMONG the many drawings which I made from living plants during my residence in Chile, between the years 1822 and 1824, and which were made known to several botanists during my short stay in England in 1825, is one which I now beg to offer to the notice of the Linnean Society. It represents a plant, to which I then gave* the name of *Cruckshanksia graminea*, after my friend Mr. Alexander Cruckshanks, a zealous contributor to South American botany; but as his name has since been commemorated under a handsome genus of the Cinchonaceous family, I have changed the title of my plant to that of *Solenomelus*, from *σωλήν tubus*, μέλος *membrum*, on account of the confluence into a tubular form both of the stamina and stigmata. The plant belongs to the natural order *Irideæ*, and is very closely allied to *Sisyrinchium*, from which, however, it differs in some essential characters.

SOLENOMELUS.

CRUCKSHANKSIA, *Miers, Trav.* ii. p. 529 (*non Hook.*).

CHAR. DIFF. *Perianthium* petaloideum; tubo brevi, incurvo; limbo 6-partito, laciniis patentibus, 3 superioribus erectioribus, 3 inferioribus deflexis. *Tubus stamineus* cum tubo perianthii coalitus, indè liberus, ventricosus-tubulosus, ore *antheras* 3 sessiles gerens. *Stylus* filiformis. *Stigma* integrum, urceolato-tubulosum, margine ciliatum. *Capsula* triquetra, 3-locularis, loculicidè 3-valvis.—Herbæ *Chilenses perennes, habitu Sisyrinchii*. *Spatha* 2-valvis, *dorso sub apice mucronata*.

CHAR. NAT. *Perianthium* monophyllum, petaloideum, mox marcescens; tubo brevi, de repente curvato; limbo 6-partito, laciniis subæqualibus, basi spathulatis, marginibus subappositis, ovatis, 3 superioribus erectioribus, 3 inferioribus sigmoideo-patentibus

* *Travels in Chile and La Plata*, 1825, vol. ii. p. 529.

deflexis. *Tubus stamineus* cum tubo corollæ adnatus, deindè liberus, medio infernè ventricosus, valdè pubescens: *antheræ* tres, ad oram tubi sessiles, extrorsæ, 2-loculares, dorso carinato medio affixæ, basi emarginatæ, rimâ exteriori dehiscentes. *Ovarium* inferum, lineari-oblongum, subtrigonum, erectum. *Stylus* filiformis, basi incurvatus, deindè horizontalis, apice parùm adscendens. *Stigma* integrum, inclusum, urceolato-tubulosum; ore tubæformi fimbriato, ultra tubum stamineum vix exserto. *Capsula* coriacea, oblonga, utrinque attenuata, 3-gona, 3-sulca, 3-locularis, 3-valvis, dissepimentis valvarum medio affixis, ad axin 2-seriatim seminiferis, apice ab axi solutis, loculicidè dehiscens. *Semina* plurima, dimidiato-ovata, ab axi placentiferâ funiculo brevissimo horizontaliter orta; *testa* dura, fusco-brunnea, favoso-punctata, punctis depressis seriatim longitudinaliter dispositis; *raphe* longitudinalis elevata, ab hilo basilari sublaterali ad apicem carunculatum etiam sublateralem (chalazam) ducta; *integumentum internum* membranaceum; *albumen* corneum, depresso-punctatum; *embryo* in basi albuminis, ferè ad mediam longitudinem attingens, inclusus, teres, sublinearis, subincurvus; *radicula* a cotyledone vix distincta, centripeta.—Herbæ *Chilenses perennes*; radice *fibrosâ*; foliis *ensiformibus*, *equitantibus*, *radicalibus bifariis*, *caulinis alternis*; caule *subancipiti*, *ramoso*; floribus *terminalibus*, *spathaccis*; spathâ *communi 2-valvi, ensatâ*, *valvis dorso sub apice mucrone erecto instructis*; spathis *partialibus plurimis, inclusis*, *2-valvibus*, *membranaceis*; floribus *breviter pedicellatis*.

1. SOLENOMELUS CHILENSIS. Foliis lineari-ensiformibus, corollâ aurantiacâ.

Cruckshanksia graminea, Miers, Trav. ii. p. 529.

Habitat apud Concon, Chile, in locis umbrosis humidis.

2. SOLENOMELUS PUNCTATUS. Foliis angustioribus, corollâ aurantiacâ; laciniis singulis supra basin puncto sanguineo notatis.

Habitat prope Concepcion, Chile.

The latter species, which I have had recently in flower, was last year raised from seed sent from Concepcion in Chile. From all the inquiries I have made I cannot learn that either species has before been cultivated in England, although I sent home abundance of seeds of the first-mentioned in 1821 and 1822.

The peculiarly curved form of the corolla, the confluence of the filaments throughout their entire length, and the union of the stigmata into an urceolate tube, offer characters that sufficiently distinguish this genus from *Sisyrinchium*. In many works on botany the latter genus is described as having the stamina "omniñò connata," but in the numerous species that I have met with,

I never found them to be so. Although sometimes the monadelphous tube is very short, in others it is united nearly throughout the length of the filaments; but in every other case I have always found short filaments manifest. It appears to me therefore desirable that the genus *Sisyrinchium* should be confined to those cases where the stamina are only partially united. Perhaps *S. odoratissimum* of Cavanilles, a plant which he found in Commerson's Herbarium, and which appears to be the same as *S. narcissoides*, Lindley (Bot. Reg. vol. xv. No. 1283.), who describes it as having entirely united stamens, should be separated from *Sisyrinchium*, not only on that account, but because it possesses a long infundibuliform corolla, with more distinct markings and a very odoriferous smell, a character quite at variance with all the other species of that genus*. It differs from *Solenomelus* by its deeply cleft style and the shape of its corolla; and upon more solid grounds than those on which *Liber-tia* has long ago been separated from *Sisyrinchium*, it may probably be admitted as a separate genus under the name of *Symphyostemon*, in which case it would occupy a place between *Tigridia* and *Ferraria*. The genus *Sisyrinchium* evidently requires a revision, but I have not at present materials at my command to enable me to attempt it, although I have met with many pretty and interesting species. It appears to me that several species added by Sprengel and others should be separated from *Sisyrinchium*, such as *S. collinum*, Cav., *S. filiforme*, Spr. (*Moræa filiformis*, Thunb., *M. virgata*, Linn.), and *S. flexuosum*, Spr. (*M. flexuosa*, Linn.), as they cannot belong to that genus on account of their bifid stigmata, but must appertain more strictly to *Moræa*.

EXPLANATION OF TAB. VIII.

- Fig. 1. A plant of *Solenomelus Chilensis*, of the natural size.
2. A flower removed from the spatha.
3. The pistillum, surrounded by the staminal tube.

* To the same will also belong *S. flexuosum*, Lindl. non Spr., described by that eminent botanist in the same work.

Fig. 4. The staminal tube removed.

5. *a.* The anthers, of the natural size ; *b.* magnified.
6. The pistillum, after the removal of the staminal tube.
7. *a.* The stigma, magnified ; *b.* cut open longitudinally. *c.* The ciliated margin, more highly magnified.
8. *a.* The ripe capsule ; *b.* cut transversely ; *c.* bursting at the apex ; *d.* a separate valve.
9. *a.* Seeds, of the natural size ; *b.* seen laterally and on the side of the raphe, much magnified.
10. A seed, much magnified, after the removal of the testa.
11. A longitudinal section of the seed, dividing the embryo.
12. The embryo removed.